

## REMARKS

This is intended as a full and complete response to the Office Action dated August 1, 2003, having a shortened statutory period for response extended one month to expire on December 1, 2003. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-3 and 5-12 remain pending in the application and are shown above. Claims 4 and 13 - 20 have been cancelled by Applicant. Claims 1-3 and 5-12 are rejected by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

Claims 1-3, 7 and 9-12 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. Publication No. 2002/0043337 (*Goodman*) in view of U.S. Patent No. 6,007,635 (*Mahawili*). *Goodman* teaches the use of peripherally located, integral lips to space a substrate above the base plate of a wafer holder. *Mahawili* teaches a platform for processing a substrate including at least one coupler for releasably securing the platform to the platform support surface. The combination of these references does not suggest support pins that engage closed ends of elongated depressions in a substrate holder at room temperature. The claimed configuration of supports pins and substrate holder accommodates both different thermal expansion of the components and positioning of the substrate holder on the support pins without scraping the support pins on the substrate holder. Thus, the combined references do not teach, show, or suggest a process chamber comprising a wafer support disposed within said process chamber for supporting a semiconductor wafer; and a heating source for heat treatment of the semiconductor wafer supported by said wafer support; wherein said wafer support comprises a susceptor having an upper surface for mounting said semiconductor wafer thereon, and a susceptor support shaft for supporting said susceptor from thereunder; wherein said susceptor support shaft has a main shaft positioned substantially coaxial with a center of said susceptor, and at least three arms radially extending from an upper end of said main shaft, each said arm having a distal end provided with a protrusion directed toward said susceptor; wherein a peripheral portion of a lower surface of said susceptor is formed with depressions, each

said depression having an elongated form extending in a radial direction of said susceptor, each said depression having a width substantially identical to an outside diameter of said protrusion, adapted to engage said protrusion; wherein a portion of each of said depressions extends along a direction substantially parallel to a plane defined by at least one of said upper surface of said susceptor or said lower surface of said susceptor so as to permit movement of said susceptor in a substantially radial direction relative to said protrusions along said depressions; and wherein each of said depressions has a closed end on an outer peripheral side thereof, said protrusions being configured to engage said closed end of said depressions at ambient temperature as recited in claim 1. Withdrawal of the rejection of claim 1 and claims dependent thereon is respectfully requested.

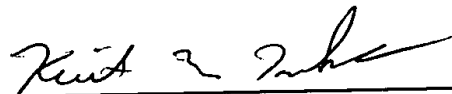
Claims 5 and 6 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. Publication No. 2002/0043337 (*Goodman*) in view of U.S. Patent No. 6,007,635 (*Mahawili*) as applied to claim 1-4, 7 and 9-12 and further in view of U.S. Patent No. 5,098,198 (*Nulman*). *Nulman* teaches a support mechanism that is comprised of silicon carbide or silicon carbide-coated graphite for fast thermal response. However, the combined teachings of *Nulman*, *Mahawili*, and *Goodman* do not suggest the chamber of claim 1 wherein the susceptor comprises graphite or the susceptor comprises graphite having a surface coated with silicon carbide as recited in claims 5 or 6. Withdrawal of the rejection of claims 5 and 6 is respectfully requested.

Claim 8 stands rejected under 35 USC § 103(a) as being unpatentable over U.S. Publication No. 2002/0043337 (*Goodman*) in view of U.S. Patent No. 6,007,635 (*Mahawili*) as applied to claim 1-4, 7 and 9-12 and further in view of U.S. Patent No. 5,427,620 (*deBoer*). *DeBoer* teaches supporting a substrate with a support shaft with rotary motion with a plurality of radially extending arms and selecting a transparent material of construction for heat transfer benefits. However, the combination of *Goodman*, *Mahawili*, and *deBoer* does not teach, show, or suggest the chamber of claim 1 wherein the susceptor support shaft comprises silica glass as recited in claim 8. Withdrawal of the rejection of claim 8 is respectfully requested.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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